EAGER TO MEET DEMAND FOR CAR

Dodge Brothers Dealers Drive Hundreds of Miles in Snow.

It is apparent from activities to be observed around Dodge Brothers works in Detroit that neither dealers nor the general public are losing time in their drive on the commercial car department. Nearly every one of the long and constant processions of passenger cars which leaves the factory gates for cross-country runs to the homes of dealers is headed by one or more of the trim appearing commercial cars on which delivery began only a few weeks ago. The fleets of cars in this respect are not unlike the great troop trains of trucks which were almost invariably preceded by a Dodge Brothers touring car or roadster when the motor system of transportation was introduced in the American army on the Mexican border.

Drivers usually are eager to be assigned to the commercial car, for, in the snow and blustery winds, its warm curtain enclosure is a comfort not to be scorned. At any rate an emphatic remark to this effect was made by a party of Georgians a few days ago when their arrival from the warm and sunny south was heralded by the first snow storm of the winter. Owing to the difficulties of freight car transportation many dealers from all sections of the country are meeting the demand for cars by going to the factory and driving them through to their destinations. This method will be followed the entire winter, regardless of weather conditions.

Commercial cars already have been driven to such far distant points as Lawrence, Kans.; Atlanta, Ga.; Hannibal, Mo., Paris, Texas.; Cincinnati, O.; Waterloo, Ia.; Davenport, Ia.; Johnstown, Pa., Terre Haute, Ind. The first commercial car went to the Dashiel Motor company, Chicago.

Commenting on the immediate demand which greeted this car, E. G. Perry, the dealer in this city, said:

"Almost since the day Dodge Brothers began building motor cars, business men have asked why a commercial car was not added to the line, as the standard passenger car obviously possessed rugged, dependable characteristics which could easily be made to serve a more general purpose. In fact, hundreds of owners who had experience with the passenger car bought the chassis alone and built special commercial bodies for use in their business.

This car is Dodge Brothers response to that demand. While the body is of a type that will answer most general purposes, it is a simple matter to meet the precise requirements of any merchant by building a body to order. We can obtain the chassis alone for this purpose. Department stores, funeral directors, grocers, meat merchants, contractors, draymen, plumbers, and in fact everyone who needs a commercial car in his business will find it interesting, at least, to study the economy phase of the commercial car suggestion."

VELIE PLANT MADE VISIT

Three years ago two members of the Brussels-Holland Athletic club started out to visit every city in the world of 25,000 population and over. They are required to walk the entire distance, be back in Brussels within 15 years and if successful, will win a wager of $15,000 each.

They arrived in San Francisco the 15th of July and the past week reached Moline, Illinois, immediately expressing an eagerness to visit the Velie factory. Every courtesy was shown the travelers and the minute and exacting details of Velie six construction fully explained, much to their gratification.

Mr. Van den Enden, leader of the group said "We have seen hundreds of Velie cars in our trip across the west and have ridden in many of them upon our sight seeing tours in towns visited. Invariably we heard nothing but good words for the car and factory, and we wished to see where and how such a really remarkable automobile was constructed."

The Velie company signed an affidavit saying Moline and the factory had been visited, which proof will be required upon the return to Holland. It is expected two years more must be spent in the United States to visit the necessary cities coming within the requirement of the wager.

35 Michelin tubes, $7.20. Freeman, 401 Myrtle.—Adv.

IT LOOKED VERY PROMISING FOR DICKIE, BUT IT DIDN'T PAN OUT . . . BY H. B. MARTIN

Owners' Service Department

A Department of Questions and Answers on Motor Matters, Conducted for The El Paso Herald by H. A. Tarnatous, Technical Editor of Popular Science.

If you have some troubles to submit to this department, address them to Auto Question Dept., El Paso Herald.

The rear axle is one of the hardest working mechanical units in the motor car. Its function is not alone to bear weight, but to transmit power. Every minute that the car is in motion the rear axle is the site of intense mechanical activity. As a consequence, this part of the mechanism requires careful attention and every car owner ought to understand something about the unit in order to be able to give it the care it needs.

Rear axles may be divided into two main classes, live and dead. Live axles are the type practically exclusively used on modern passenger cars. The term live, means simply that the axle turns. Dead axles do not turn and their use is confined to vehicles having double chain drive.

Live axles are subdivided into three classes, which are called floating, semi-floating and three-quarter floating and a further classification is made according to the type of gearing employed in them to transmit the power.

In the live axles of today the components are a hollow spheroid in the center, from which project two tubes. In the central portion is the differential unit, consisting of a number of gears. Extending from the differential are two shafts, one through each of the tubes. To the ends of these shafts the wheels are attached.

The names floating, semi-floating and three-quarter floating, are derived from the shafts. The floating shaft does in a manner do just that; it is not required to support any of the weight of the load, but simply drives the wheels and takes a little torsional stress. In the floating axle the wheel bearings are outside of the axle tube, so that the wheels really rest on the tubes. In this way the shafts may be removed without disturbing other parts.

In the semi-floating type the outer tube bearings are inside the tube and the shafts must bear some of the actual load, as well as absorb certain torsional stresses. Obviously in this design it is not so easy to remove the shafts. In the three-quarter floating type of construction, the outer tube bearings are on the outside of the tubes and there is a rigid connection between the shaft and the wheel. This axle too must support some of the load, in addition to transmitting power.

The gear types used in rear axles of today include straight and spiral bevel, worm, internal gear, two speed bevel and single and double chain. Of these types but three, straight, spiral and two speed bevel, are used on present day passenger cars. The spiral bevel within the past few years has come to the front and is now in the lead in popularity, due to its quiet running and general efficiency. The two speed type is used by only one maker.

No car owner who has experienced rear axle trouble needs to be warned to take all possible precautions to avoid it. Many serious troubles may develop in this unit, if it is not treated with due respect. Axle shafts sometimes break, or again they may be twisted out of all reasonable shape. Bearings occasionally are crushed. The gears in the differential unit are peculiarly liable to chipping, a trouble that may result in ruining the whole mechanism.

The most important item in the care of the rear axle is proper lubrication. At intervals at least twice per season, the rear axle housing should be flushed out with kerosene and then new oil should be installed. Note that it be oil and not grease which is unsuited to this part, especially so in cold weather.

But lubrication is not all. The function of the rear axle, as we have noted, involves the taking of torque or twist, which puts a heavy strain on the parts. If they are not strong enough, trouble is bound to result. When a part of the rear axle assembly breaks, it should first be ascertained what caused the break. Often the parts get out of alignment and in this case, replacement will not help, for the unit must be straightened up or the same thing will occur again. Aligning the rear axle is a job for the service station, unless the owner is unusually expert as a mechanic. When an intermittent hum, a noise with stresses or inflexions, comes from the axle, it may be accepted that the gears are running out of alignment or that they have suffered injury and are themselves warped out of shape. Chipping of the teeth is common and in this case, the pieces of metal get down in the mechanism and do further injury.

In placing lubricant in the rear axle, it must be remembered that too much is almost as bad as too little. The excess oil works its way along to axle tube and gets into the brake drums, interfering with their functioning. This trouble may be cured by installing felt washers in the ends of the axle tubes. In many modern axles this condition is provided for by allowing the oil to run out through a small hole in the end of the tubes and some owners of older cars have followed this practice by drilling holes in the tubes. It is better, however, to try the felt washers to begin with and if these do not serve, then drill a hole.

In rear axles of the type having oscillating spring supports, these latter must be lubricated, at the point where they turn on the axle tubes.

Finally it may be stated that whenever the rear axle begins emitting a peculiar noise of any kind, it is time to get the car into the experts at the service station. Most rear axle adjustments and repairs are beyond the ordinary car owner.

A differential adjustment (when this is possible though it is not in all cars) is made by loosening two collars one on either side of the differential unit, and shifting the unit either to the left or to the right depending upon whether more or less clearance is needed between the pinion and ring gear. Only experienced hands should do this work. It is possible also in most cars to adjust the driving pinion alone. But this the owner can do; give the rear axle a chance by lubricating it at regular intervals and if any unusual noise develops in the part, he can throw up his hands and call for help at once instead of allowing it to continue until serious and perhaps irrepairable damage has been done.

* * *

PRACTICAL PARAGRAPHS.

Watch the Brakes.

Brake bands have a certain limit of usefulness. As soon as the wheels do not slide together when the pedal is depressed, the bands should be examined. In many cases the wear may be compensated for by adjustment of the rods, but again the band has worn so much on one side that it makes only partial contact with the drum. Should the bands fail to hold because of oil or grease on the face, a kerosene bath will restore their grip. After driving in the rain it will be found that the brake bands are covered with dirt; some of which will soon make its way under the band and cut the drum. A timely and thorough cleaning will prevent this trouble.

Home Made Scrapers.

Old files, particularly those of the half round variety, may be made over into really admirable bearing scrapers. Apply the file to an emery wheel, thereby grinding off the teeth and then grind it into any form desired.

Don't.

When it is necessary to back a car into place by pushing, the first thing on which most drivers settle is the radiator cap. This is rather a dangerous practice, for the exertion of such heavy pressure against this part is quite likely to break it off.

Gasoline Storage.

Before making arrangements for installing an underground gasoline storage system, the car owner should look well to his local and state laws. In many places it is necessary to vent the tank so that the vent pipe comes within a given distance of the roof of the building. Some laws make it necessary to have the tank located a given distance from the house and if this is not complied with, certain rules regarding venting must be met. Examine all phases of the matter carefully beforehand.

Commutator Brushes.

When the commutator brushes of the generator become slightly worn, so that they cause arcing, they should be filed to make good contact with the commutator. A small magneto file is best for this purpose. If the commutator itself proves to be dirty, a piece of fine sandpaper held against it while the generator armature is revolving, will clean it off. A mistake frequently made is in adjusting the brushes so that the springs are stretched too much, causing the brushes to heat rapidly, by reason of the excessive friction. This causes rapid wear. The brushes should be set so as just to touch the commutator lightly and yet not so much as to give poor contact. The curvature of the brush should be the same as that of the commutator.

Engine Knock.

When the engine knocks with the spark advanced or retarded, the water system should be examined. A dry water system will cause excessive heating; preignition follows and knocking.

Caring for the Top.

For removing dust and dirt from the car top, use a dry brush. Never employ gasoline, which acts with destructive effect upon the rubber in the top material. Soap and warm water are the best agents to use in removing grease spots and it is a mistake to put any other cleaning agent in the water, on account of its possible ill effects on the rubber in the top material.

Emergency Anti-Freeze.

When the car owner is caught in a freeze and no regular anti-freeze solution for the water system is available, a quantity of table salt thrown into the cooling system will help to prevent freezing. A saturated solution of common salt in water freezes at about zero.

* * *

OWNERS' SERVICE DEPARTMENT.

A connecting rod broke in my engine right in the middle and I claim I ought to get a replacement because of defective material. Can a rod break in the middle from any other cause?—R. E. H.

While it is possible for defective metal to have been the cause, it also is quite likely that improper alignment of the rod caused the trouble. Or if the bearing was recently tightened and brought up too much this might induce excessive strain on the rod which would break at its weakest point.

* * *

What do you think of the future of the eight and the twelve cylinder cars? It looks to me as if the six will be the only type in a few years and I cannot see why the eights and twelves should gain any headway.—H. O. K.

I must disagree with you about the future of the eights and twelves for I believe that within a few years, especially so if the war stops, there will be many more of both. If you ever have driven a twelve you should know that it is quite impossible to get the same smoothness in an engine with fewer than twelve or perhaps eight cylinders. The old objections to these multi-cylinder engines are all overcome in our present types so that they are just as reliable as any other.

* * *

The steering wheel of my car has developed an alarming looseness. I have to turn the wheel four inches or more before the wheels move. How can I adjust the steering gear to make the wheel tight again?—Carney.

This looseness may be caused by play in the steering gears at the bottom of the post; it may be in the ball joints at either end of the drag link, in the knuckles or in the tie-rod. Start at the steering post and work along towards the front wheels, taking up the play in each location, but do not tighten too much. There must be a slight play at the wheel, to take up the motion engendered through the ordinary jolts of travel.

* * *

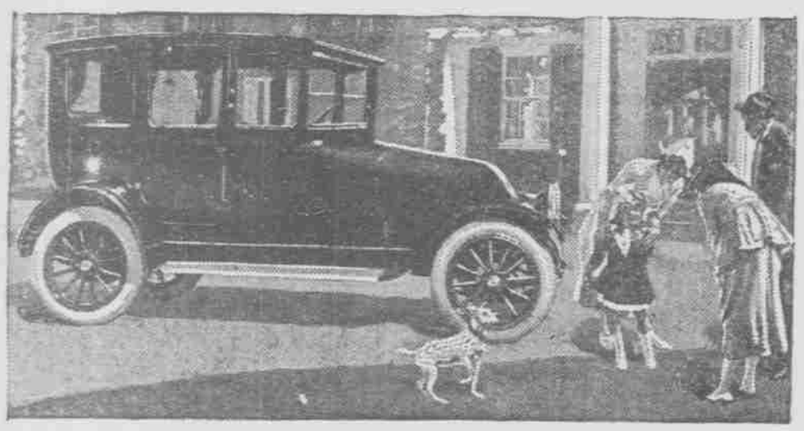
Is it true that a valve-in-the-head engine of any kind is more powerful or better than any other type?—T. H.

Not by any means. In fact the valve location is simply one factor in power output and performance. It is quite possible to get an L-head engine of a certain size to outperform a valve-in-head of the same size.

What is the right way to calculate the displacement of an engine?—B.

The formula for displacement is $D^2 \times .7854 \times N \times 3$, in which D is the bore in inches, N, the number of cylinders and S, the stroke in inches. Thus a four cylinder 3 by 4 engine has a displacement of: $3 \times 3 \times .7854 \times 4 \times 4$ which equals 113.1 cubic inches.

Finest Laundering—Curtains. Acme Laundry—Phone 4300.—Adv.



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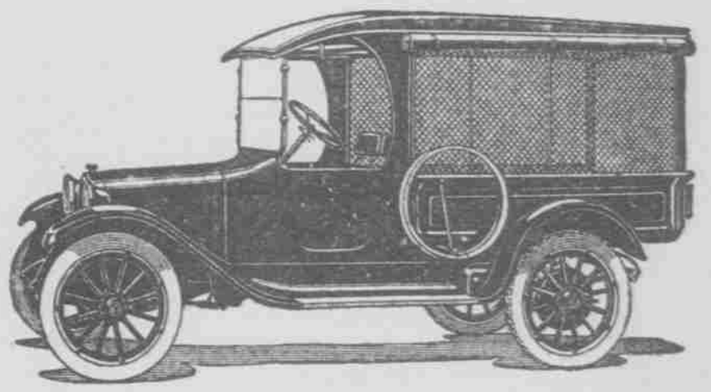

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